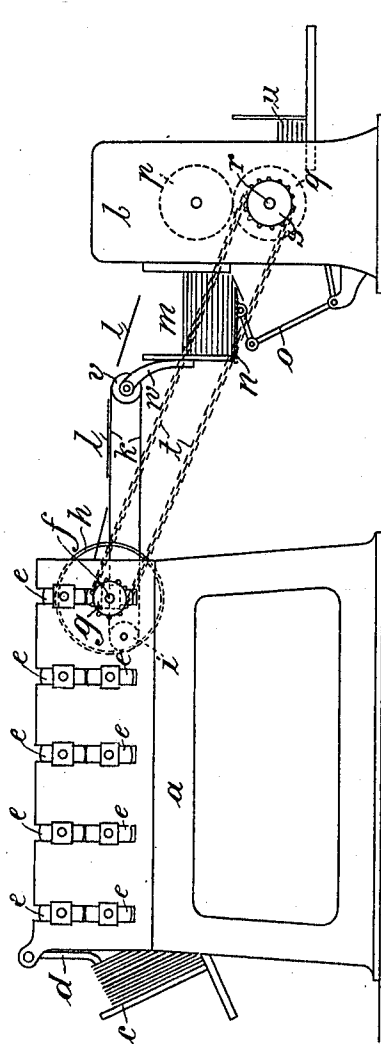


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 PLANT FOR THE MANUFACTURE OF ENVELOPS, PAPER BAGS, OR THE LIKE.
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952,986.

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UNITED STATES PATENT OFFICE.

ROBERT ERNST FISCHER AND MAX WESCHER, OF ELBERFELD, GERMANY.

PLANT FOR THE MANUFACTURE OF ENVELOPS, PAPER BAGS, OR THE LIKE.

952,986.

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To all whom it may concern:

Be it known that we, ROBERT ERNST FISCHER, a subject of the German Emperor, residing at Elberfeld, in the Kingdom of Prussia, German Empire, and MAX WESCHER, a subject of the German Emperor, residing at Elberfeld, in the Kingdom of Prussia, German Empire, have jointly invented a new and Improved Plant for the Manufacture of Envelops, Paper Bags, or the Like, of which the following is a specification.

The present invention relates to a new and improved plant for the manufacture of envelops, paper bags or the like and it has for its object the combination of a machine for gumming and folding the work with a printing machine, the object being to effect the automatic transfer of the envelops to the printing machine and to obtain a high rate of output from the installation as a whole.

The combination which consists, say, of an envelop machine with a printing machine, for the purpose of printing the envelops as soon as they are manufactured, in such a way that the envelops on leaving the folding machine immediately come between the printing rollers of the printing machine, presents numerous disadvantages. For instance the gummed or adhesive coated surfaces of the envelops being moist when the latter pass between the printing cylinders, the printing becomes impaired and the gum or adhesive squeezed out; moreover if at any time an envelop should remain behind owing to failure of the suction device of the envelop machine or the like, the printing roller must be raised from the counting roller in order to prevent the latter receiving an impression and so soiling the succeeding envelop. As the lifting of the printing roller and its subsequent depression occupies a certain amount of time, the output of the installation is greatly impaired by the necessity for effecting this operation.

In order that the said invention may be clearly understood and readily carried into effect, we will proceed to describe the same with reference to the accompanying drawing which illustrates somewhat diagrammatically means whereby the above mentioned objections are avoided or minimized.

The cut sheets of paper for the envelop machine *a* are placed in a receptacle or holder *c* from which the sheets are separately transferred by suction device *d* to

the machine *a* and introduced into the train of rollers constituted by the respective pairs indicated at *e*. These rollers effect the folding and gumming of the envelops and the finished envelops *l* pass by means of an endless band *k* to the collecting receptacle *m*. The band *k* is arranged about the rollers *i* and *v* the latter being mounted in bearings or brackets *w* provided on the receptacle *m*. A reciprocating slide *n* is arranged to work beneath the receptacle *m* so as to engage the sealing flap of the lowermost envelop, and in any desired or known manner brings it between the printing rollers *p* and *q* of the printing machine *b*. The envelops as they are printed fall into a collector or receptacle *u*.

The result of the arrangement above described is that the envelops on leaving the machine *a* have time to dry in the collecting receptacle *m* and so do not reach the rollers of the printing machine until they are dry, and in addition the failure of the suction device *d* and the absence of an envelop does not necessitate the lifting of the printing roller *p*, as even in case no envelop should fall into the collecting box *m*, the slide *n* invariably takes an envelop from the reserve which is left in the said receptacle and thereupon conveys it to the printing rollers, so that the failure of the suction device merely entails for the time being a diminution of the reserve of envelops in the collecting receptacle *m*.

A further important advantage is obtainable by means of the present invention as the envelop machine can be driven more rapidly than the printing machine so as to avoid the necessity of stopping the printing machine during the insertion of fresh sheets of paper in the receptacle *c*, it being understood that while the envelop machine is operative the reserve of envelops in the collector *m* constantly increases. This additional reserve is then dealt with by the printing machine, while the insertion of the aforesaid fresh sheets in the receptacle *c* is being effected. As the output of the plant is mainly restricted by the output from the printing machine, which cannot be run too quickly it constitutes an important improvement in the art that the printing machine can continue to operate during the time that the envelop machine is running idly owing to the insertion of fresh sheets. In the drawing illustrating the present invention, this

last mentioned result is incidental to the arrangement of a chain wheel *g* provided on the shaft *f* of the envelop machine *a*, the said shaft also carrying a driving pulley *h*.
5 The chain wheel *g* by means of a chain *t* drives the somewhat larger chain wheel *s* pertaining to the shaft *r* of the printing machine *b*.

We claim:

- 10 1. In a machine for making and printing envelops, paper bags or the like, the combination of the following instrumentalities; a folding and gumming mechanism, a printing mechanism, driven therefrom but at
15 lower speed, a collecting receptacle in which the articles are piled horizontally, means for automatically delivering the gummed and folded articles, one at a time, to the receptacle, and means for automatically delivering
20 the lowermost one of the pile to the printing mechanism.

2. In a machine for making and printing envelops, the combination of the following instrumentalities; a folding and gumming mechanism, a printing mechanism driven therefrom but at a lower speed, a collecting
25 receptacle in which the envelops are piled horizontally, means for automatically delivering the gummed and folded envelops one at a time to the receptacle, a reciprocating slide beneath said receptacle, upon
30 which the pile rests, adapted to engage the sealing flap of the lowermost envelop and deliver it to the printing mechanism.

In testimony whereof we have signed our
35 names to this specification in the presence of two subscribing witnesses.

ROBERT ERNST FISCHER. [L. S.]
MAX WESCHER. [L. S.]

Witnesses:

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